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COLBERT FOSSIL PLANT UNITS 1 THROUGH 5 REDUCTION SYSTEMS FOR CONTROL OF NITROGEN OXIDES

Colbert County, Alabama

TENNESSEE VALLEY AUTHORITY

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Colbert County, Alabama

Lead agency: Tennessee Valley Authority

**For further information,
contact:** Tina M. Tomaszewski
Senior NEPA Specialist
Tennessee Valley Authority
1101 Market Street (MR 2T)
Chattanooga, TN 37402
Phone: (423) 751-7291
Fax: (423) 751-3230
e-mail: tmtomaszewski@tva.gov

Abstract: The Tennessee Valley Authority (TVA) is proposing to install and operate equipment for the removal of nitrogen oxides (NO_x) from coal combustion flue gases at Colbert Fossil Plant. Colbert Fossil Plant is located in Colbert County, Alabama, about 10 miles west of downtown Tuscumbia and 3 miles east of Cherokee. Installation of the NO_x removal equipment would begin in 2003 and be completed in 2005.

Nitrogen oxide emissions are a factor in causing acid rain and high ground-level ozone concentrations. NO_x is produced in motor vehicle and industrial combustion processes, including electric power generation stations such as TVA's Colbert Fossil Plant. TVA must meet the new Title 1 Clean Air Act (CAA) requirements for ozone, which is formed in part by NO_x . To meet CAA requirements, TVA is considering alternative technologies involving installation of either a selective catalytic reduction (SCR) system or a combination of SCR and NO_x Tech systems for installation at Colbert Fossil Plant. Either NO_x reduction system is expected to reduce emissions of NO_x from the plant by up to 90 percent and would be primarily installed within the existing plant structure. An ammonia storage facility also located within the plant site would be included in either system.

In accordance with the National Environmental Policy Act, TVA has prepared a Final Environmental Assessment on the No Action and three proposed Alternative Actions to comply with CAA requirements regarding NO_x emissions. The Draft Environmental Assessment was distributed in November 2002. TVA received four comments on the Draft. Responses to these comments are addressed in the Final Environmental Assessment.

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